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MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			MATTIS, JASON E	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/823,495	<b>Applicant(s)</b> SURAZSKI ET AL.	
	<b>Examiner</b> Jason E. Mattis	<b>Art Unit</b> 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 18-28, 32-38 and 45-55 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 53-55 is/are allowed.  
 6) ☒ Claim(s) 1-11, 18-28, 32-38 and 45-52 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to the amendment filed 11/16/06. Previous claim objections have been withdrawn due to the amendment. Claims 1-11, 18-28, 32-38, and 45-55 are currently pending in the application.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11, 26-28, and 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 9, lines 11-12 of this claim contain the limitation "assist the network device in establishing a communicative connection...". It is unclear what "assist" specifically means. For example, it is unclear what and how the connection is assisted. It is recommended that this limitation in claim 9 be amended so that it is similar to the limitation in lines 6-7 of claim 53 that states, "exchanging Session Initiation Protocol (SIP) signaling messages over the first and second call manager connections to assist the network device in establishing a communication connection...". The limitation of claim 53 makes it clear that messages are sent over the first and second

call manager connections and that these messages are what "assist" the establishment of a communication connection.

Claims 26 and 36 both contain a limitation similar to that of claim 9 and are rejected for the same reasons.

Claims 10-11, 27-28, and 37-38 are rejected because they depend on rejected claims 9, 26, and 36 respectively.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 18-25, 32-35, and 45-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Born et al. (U.S. Pat. 6404887) in view of Gupta et al. (U.S. Pat. 5689556) and in further view of Azriel et al. (U.S. Pat. 6724736).

**With respect to claims 1, 18, and 32**, Born et al. discloses a signaling network switch using instructions stored on a storage medium to execute a method (**See column 5 lines 25-65 and Figure 1 of Born et al. for reference to an inter-exchange carrier (IXC) office 104, which is a network switch that has stored instructions to route calls over a network**). Born et al. also discloses a network interface for coupling

to a network (**See column 5 lines 25-45 and Figure 1 of Born et al. for reference to IXC 104 having network interfaces to other elements of the system 100**). Born et al. further discloses a processor coupled with the network interface (**See column 5 lines 46-65 and Figure 1 of Born et al. for reference to the IXC 104 using interfaces to route calls between calling and called parties, meaning the IXC 104 acts as a processor to route the calls**). Born et al. also discloses establishing a call manager connection with a call manager (**See column 5 lines 25-65 and Figure 1 of Born et al. for reference to establishing a disassociated signaling channel, which is a call manager connection established with IXC 104, which acts as a call manager**). Born et al. further discloses exchanging signaling messages over the call manager connection to establish a communicative connection with an endpoint other than the call manager, with the signaling messages not including any voice data **See column 5 lines 25-65 and Figure 1 of Born et al. for reference to establishing using the signaling channel to establish a connection, which is a communicative connection, over the channelized data network with a called party, which is an endpoint**). Born et al. also discloses transmitting to the endpoint through the communicative connection data that represents received audio content (**See column 5 lines 46-65 and Figure 1 of Born et al. for reference to transporting call data, which is encoded audio content, through the connection over the network from the calling party to the called party**). Although Born et al. does disclose sending a signal through the first connection to control the operation of an echo canceller (**See column 7 lines 1-30 of Born et al. for reference to controlling the operation of an echo canceller using a**

**signal)**, Born et al. does not specifically disclose analyzing the audio content and transmitting a warning signal through the communicative connection if a periodic signal is detected in the audio content. Born et al. also does not specifically disclose that the audio content is transmitted as data packets through a data network.

**With respect to claims 2, 19, and 33**, Born et al. does not disclose that analyzing the audio content is performed by looking ahead.

**With respect to claims 3 and 20**, Born et al. does not disclose that the periodic signal has a double periodicity.

**With respect to claims 7, 24, and 34**, Born et al. does not disclose determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending.

**With respect to claims 1-3, 7, 18-20, 24, and 32-34**, Gupta et al., in the field of communications, discloses analyzing audio content and transmitting a warning signal if a periodic signal is detected (**See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to analyzing audio content by searching for a DTMF tone, which is a periodic signal, and for reference to setting a flag, which is a warning signal that is set when a periodic signal is detected**). Gupta et al. also discloses that analyzing the audio content is performed by looking ahead (**See column 4 lines 38-58 and Figure 6 of Gupta et al. for reference to sampling and analyzing audio content by looking at the audio content before it is sent to the end user**). Gupta et al. further discloses that the periodic signal has a double periodicity (**See column 4 lines 27-37 of Gupta et al. for reference to the**

**periodic signal being a DTMF tone, which has double periodicity).** Gupta et al. also discloses determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending **(See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to the DTMF detector running continuously and for reference to continuously updating the flag, meaning that when the end of the period signal is detected, the flag will be set to false, which is a clear signal corresponding to the end of the periodic signal).** The periodic signal detector of Gupta et al. has the advantage of making sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller **(See column 2 lines 6-36 of Gupta et al. for reference to this advantage).**

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gupta et al., to combine the periodic signal detector of Gupta et al. with the system and method of Born et al., with the motivation being to make sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller (See column 2 lines 6-36 of Gupta et al. for reference to this advantage).

**With respect to claims 1, 18, and 32,** Azriel et al., in the field of communications, discloses transmitting audio content in the form of data packets through a data network **(See column 10 line 57 to column 11 line 8 and Figure 4 of Azriel et al. for reference to a network that transmits audio content in the form of voice data packets over a packet network).** Using the packet network to send audio encoded data packets has the advantage of allowing audio calls to be connected and

routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Azriel et al., to combine using the data packet network of Azriel et al., with the control signaling system and method of Born et al. and Gupta et al., with the motivation being to allow audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

**With respect to claims 4 and 21**, Born et al. discloses that the signal is in-band (See column 5 line 66 to column 6 line 15 of Born et al. for reference to the signals that control the echo canceller being sent in-band with the call data using bit robbing).

**With respect to claims 5 and 22**, Born et al. discloses that the signal is out of band (See column 2 lines 19-27 of Born et al. for reference to using CCS signaling send control signals out of band in a dedicated control channel).

**With respect to claims 6 and 23**, Born et al. discloses that the warning signal is a named signaling event (See column 7 lines 1-30 of Born et al. for reference to echo canceller controlling signal being a named signal event that is used to set the echo canceller to an inactive mode).

**With respect to claims 8, 25, and 35**, Born et al. discloses determining a duration to send a signal to an echo canceller and encoding the duration in the signal (See column 7 lines 1-30 of Born et al. for reference to using a signal to set the



**echo canceller in an active or inactive mode for a particular number of frames and/or for a particular amount of time).**

**With respect to claim 45**, Born et al. also discloses establishing a first connection through a network **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at point 6 of Figure 3, the IXC selecting an outbound termination trunk, which is a first connection through the network, for forwarding a call)**. Born et al. further discloses establishing a second connection **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at points 4 and 5 of Figure 3, the IXC establishing a second connection through the network with a local office of a calling party)**. Born et al. also discloses receiving audio content through the second connection and transmitting through the first connection an encoded form of the audio content **(See column 5 lines 46-65 and Figure 1 of Born et al. for reference to transporting call data, which is encoded audio content, through the connections over the network from the calling party to the called party)**. Although Born et al. does disclose sending a signal through the first connection to control the operation of an echo canceller **(See column 7 lines 1-30 of Born et al. for reference to controlling the operation of an echo canceller using a signal)**, Born et al. does not specifically disclose analyzing the audio content and transmitting a warning signal through the first connection if a periodic signal is detected in the audio content. Born et al. also does not specifically disclose that the audio content is transmitted as data packets through a data network.

**With respect to claim 46**, Born et al. does not disclose that analyzing the audio content is performed by looking ahead.

**With respect to claim 47**, Born et al. does not disclose that the periodic signal has a double periodicity.

**With respect to claim 51**, Born et al. does not disclose determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending.

**With respect to claims 45-47, and 51**, Gupta et al., in the field of communications, discloses analyzing audio content and transmitting a warning signal if a periodic signal is detected **(See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to analyzing audio content by searching for a DTMF tone, which is a periodic signal, and for reference to setting a flag, which is a warning signal that is set when a periodic signal is detected)**. Gupta et al. also discloses that analyzing the audio content is performed by looking ahead **(See column 4 lines 38-58 and Figure 6 of Gupta et al. for reference to sampling and analyzing audio content by looking at the audio content before it is sent to the end user)**. Gupta et al. further discloses that the periodic signal has a double periodicity **(See column 4 lines 27-37 of Gupta et al. for reference to the periodic signal being a DTMF tone, which has double periodicity)**. Gupta et al. also discloses determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending **(See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to the DTMF detector running continuously and for reference to continuously updating the flag,**

**meaning that when the end of the period signal is detected, the flag will be set to false, which is a clear signal corresponding to the end of the periodic signal).** The periodic signal detector of Gupta et al. has the advantage of making sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller **(See column 2 lines 6-36 of Gupta et al. for reference to this advantage).**

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gupta et al., to combine the periodic signal detector of Gupta et al. with the system and method of Born et al., with the motivation being to make sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller (See column 2 lines 6-36 of Gupta et al. for reference to this advantage).

**With respect to claim 45,** Azriel et al., in the field of communications, discloses transmitting audio content in the form of data packets through a data network **(See column 10 line 57 to column 11 line 8 and Figure 4 of Azriel et al. for reference to a network that transmits audio content in the form of voice data packets over a packet network).** Using the packet network to send audio encoded data packets has the advantage of allowing audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Azriel et al., to combine using the data packet network of Azriel et al., with the control signaling system and method of Born et

al. and Gupta et al., with the motivation being to allow audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

**With respect to claim 48**, Born et al. discloses that the signal is in-band (**See column 5 line 66 to column 6 line 15 of Born et al. for reference to the signals that control the echo canceller being sent in-band with the call data using bit robbing**).

**With respect to claim 49**, Born et al. discloses that the signal is out of band (**See column 2 lines 19-27 of Born et al. for reference to using CCS signaling send control signals out of band in a dedicated control channel**).

**With respect to claim 50**, Born et al. discloses that the warning signal is a named signaling event (**See column 7 lines 1-30 of Born et al. for reference to echo canceller controlling signal being a named signal event that is used to set the echo canceller to an inactive mode**).

**With respect to claim 52**, Born et al. discloses determining a duration to send a signal to an echo canceller and encoding the duration in the signal (**See column 7 lines 1-30 of Born et al. for reference to using a signal to set the echo canceller in an active or inactive mode for a particular number of frames and/or for a particular amount of time**).

***Allowable Subject Matter***

4. Claims 53-55 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claim 53 is allowable over the prior art of record since the prior art of record fails to disclose or render obvious the limitation of "exchanging Session Initiation Protocol (SIP) signaling messages over the first and second call manager connection to assist the network device in establishing a communication connection the endpoint through a packet switched network".

Claims 54-55 are allowable since they depend on allowable claim 53.

6. Claims 9, 26, and 36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. Claims 10-11, 27-28, and 37-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-8, 18-25, 32-35, and 45-52 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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